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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,976	06/08/2001	David M. Pepper	B-3918 617820-9	2143

7590

08/25/2003

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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,976

Applicant(s)

PEPPER, DAVID M.

Examiner

Daniel J Petkovsek

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on response filed on June 6, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-43 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 23 is/are rejected.
- 7) ☒ Claim(s) 7-22, and 24-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: Brian Healy

DETAILED ACTION

This office action is in response to the response filed by Applicant on June 6, 2003.

Information Disclosure Statement

1. The prior art documents submitted by Applicant in the Information Disclosure Statements filed on March 11, 2003, have been considered and made of record (note attached copy of forms PTO-1449).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 4 recites the limitation "a wavefront compensator integrated with the array of optical apertures" in line 2. There is insufficient antecedent basis for this limitation in the claim, since optical apertures are not in independent claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Keene et al. U.S.P. No. 4,813,766.

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Keene et al. U.S.P. No. 4,813,766 teaches (Figs. 1 and 8A-8C, column 3 lines 11-46, column 12 line 50 through column 13 line 20, *column 13 lines 30-37*) an optical system (and inherent method of same) comprising: an optical pulse source 30 generating an input, a controllable delay structure 32 providing selectable delay for each optical output pulse stream (see Figs. 8A-8C), with a controllable delay relative to the input. Regarding claims 2-4, the output streams are beam-steered across subapertures 38.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keene et al. U.S.P. No. 4,813,766.

Keene et al. U.S.P. No. 4,813,766 teaches (Figs. 1 and 8A-8C, column 3 lines 11-46, column 12 line 50 through column 13 line 20, *column 13 lines 30-37*) an optical system (and inherent method of same) comprising: an optical pulse source 30 generating an input, a controllable delay structure 32 providing selectable delay for each optical output pulse stream (see Figs. 8A-8C), with a controllable delay relative to the input. Keene et al. '766 does not explicitly teach that the source is modulated to produce modulated input pulse streams. However, it would have been an obvious modification to a person having ordinary skill in the art at the time the invention was made to modulate input sources for the purpose of creating a source that fits the specific needs of the optical

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system, since the modulation of optical input signals are well known in the art.

Regarding claim 6, the input source is a laser.

Allowable Subject Matter

8. Claims 31-43 are allowed. The pertinent prior art does not teach or reasonably suggest an optical beam steering device comprising: at least one layer of electro-optically active material, the layer having a proximal end and distal end, a means for applying a voltage across the layer, a plurality of tapped output couplers, each tapped coupler disposed in an increasing distance from the proximal end, and an array of apertures, each aperture receiving an optical beam output from a corresponding tapped output coupler of the plurality of output tapped couplers. Method restrictions (claims 40-43) of same device of independent claim 31 are also allowed.

9. Claims 7-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The relevant prior art does not teach or reasonably suggest, in combination with independent claim 1, a plurality of tapped output couplers arranged in an increasing distance from the proximal end. The dependent claims 8-14 and 16-22 upon claims 7 and 15 are also objected to as being allowable, if including the base claim and any intervening claim.

10. Claims 24-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The relevant prior art does not teach or reasonably suggest coupling the pulse stream into a layer of electro-optic material having

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multiple output ports, and coupling a portion of the pulse stream out of the layer at each output port, the controllable time delay function put in use by voltage control.

Conclusion


11. Applicant's response filed on June 6, 2003, has been fully considered. Rejections to claims 1-6 and 23 to Paek '177, and rejections to claims 1 and 23 to Labaar '484 have been withdrawn.


This action is made **NON-FINAL**, since new art (Keene et al. '766) has been used to make rejections. Examiner has made new rejections to claims 1-6, and 23, as fully addressed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (703) 305-6919. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9321.


Daniel Petkovsek
August 13, 2003


Brian Healy
Primary Examiner